

## METHOD FOR GROWING COMPOUND SEMICONDUCTOR CRYSTAL

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Inventor(s): OTSUKA NOBUYUKI; others: 01  
Applicant(s): FUJITSU LTD  
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### Abstract

**PURPOSE:** To enable satisfactory epitaxial growth of an atomic layer at a low temp. and to form a steep hetero interface by feeding at least one of the constituent elements of a compd. semiconductor as an alkyl compd. and carrying out epitaxial growth of an atomic layer on a specified face of a substrate.

**CONSTITUTION:** When a compd. semiconductor crystal is grown on a substrate of a compd. semiconductor such as GaAs by epitaxial growth of an atomic layer, at least one of the constituent elements of the compd. semiconductor to be grown is fed as a gaseous alkyl compd. such as  $(C_2H_5)_3Ga$  and the (110) face of the substrate is used as the growth surface. Since a Ga atom bond to three As atoms on the growth surface of the substrate and has only one dangling bond, only one atomic layer can be adsorbed with the  $(C_2H_5)_3Ga$  and epitaxial growth of the atomic layer is enabled.